

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A catheter assembly comprising:
a control handle;

an inner member having a distal portion for mounting a medical device and a proximal portion having a proximal end attached to the control handle and a distal end attached to the distal portion;

a guide wire receiving member defining a lumen for receiving a guide wire attached to the proximal portion of the inner member; and

an outer member having a proximal end and a distal end, the proximal end being connected to the control handle, the outer member being adapted to at least partially cover the medical device and being retractable by actuation of the control handle to uncover the medical device, the outer member having a distal opening ~~in communication with~~ and a lumen through which at least a portion of the guide wire receiving member extends and a guide wire exit opening formed proximal to the distal end of the outer member, the inner member and the outer member dimensioned for relative axial movement along a longitudinal axis, wherein the outer member includes an anti-rotation component located near the guide wire exit opening which extends into lumen of the outer member and abuts against a portion of the inner member to permit axial movement but prevent rotational movement between the outer and inner members.

2. (Withdrawn) The catheter assembly of claim 1 wherein the guide wire receiving member is made from a tubular member having a wire coil disposed therein.

3. (Currently Amended) The catheter assembly of claim 1 wherein the proximal portion of the inner member is made with a hypotube.

4. (Previously Presented) The catheter assembly of claim 3 wherein the hypotube is made from stainless steel or a nickel-titanium alloy.

5. (Withdrawn) The catheter assembly of claim 1 wherein the proximal portion is made from a tubular member having a wire coil disposed therein.

6. (Withdrawn) The catheter assembly of claim 1 wherein the proximal portion is made with a support mandrel.

7. (Withdrawn) The catheter assembly of claim 6 wherein the support mandrel is made from a flexible elongate wire.

8. (Original) The catheter assembly of claim 1 wherein the outer member includes a distal restraining sheath portion adapted to cover the medical device which is made from a nylon-coated polyimide material.

9. (Original) The catheter assembly of claim 8 wherein the nylon-coated polyimide material has an inner layer made from polyimide and an outer layer made from nylon.

10-17. (Canceled)

18. (Currently Amended) A sheath for restraining a self-expanding stent on a catheter assembly, the sheath comprising:

a tubular body having an inner surface which directly contacts the self-expanding stent and an outer surface, the tubular body being made from a layer of

polyimide to form the inner surface and a layer of nylon [covering] bonded to the layer of polyimide to form the outer surface.

19-23. (Canceled)

24. (Previously Presented) The catheter assembly of claim 3 wherein the hypotube includes a lumen for flushing fluid into the catheter.

25. (Previously Presented) The catheter assembly of claim 1 wherein the guide wire receiving member is a tubular member having a lumen for receiving the guide wire.

26. (Currently Amended) A catheter assembly comprising:
a control handle;

an inner catheter member including a distal mounting portion adapted to have a medical device mounted thereon, a proximal portion having a proximal end attached to the control handle, and a guide wire receiving member for receiving a guide wire, the guide wire receiving member being attached to the proximal portion of the inner catheter member, the guide wire receiving member having a proximal end with an opening and a distal end with an opening, a lumen extending between these openings formed on the distal and proximal ends of the guide wire receiving member; and

an outer catheter member co-axially disposed over the inner catheter member and dimensioned for relative axial movement relative to each other, the outer catheter member having a distal portion adapted to at least partially cover the medical device, the outer catheter member having [and] a proximal end attached to the control handle and a distal end opening, the outer catheter member being movable by the control handle to uncover the medical device, the outer catheter

member including a proximal portion having a lumen for receiving at least a portion of the inner catheter member and an intermediate portion having a lumen through which the guide wire receiving member extends and a guide wire exit opening formed proximal to the distal end of the outer member, wherein the ~~proximal portion of the outer catheter member is attached to and extends into the lumen of the intermediate portion and the distal portion of the outer catheter member is attached to the intermediate portion and the inner member~~ the outer catheter member includes an anti-rotation component located near the guide wire exit opening which extends into the lumen of the intermediate portion and abuts against a portion of the inner catheter member to permit axial movement but prevent rotational movement between the outer and inner catheter members.

27. (Currently Amended) The catheter assembly of claim 26, wherein the proximal end of the guide wire [restraining] receiving member [remains] is slidably disposed within the lumen of the intermediate portion of the outer catheter member.

28. (Previously Presented) The catheter assembly of claim 26 wherein the distal mounting portion of the inner catheter member has a lumen extending therethrough and a portion of the guide wire member extends through this lumen.

29. (Previously Presented) The catheter assembly of claim 28 wherein the portion of the guide wire receiving member extending through the lumen of the distal mounting portion is secured to the wall forming the lumen.

30. (Previously Presented) The catheter assembly of claim 28 wherein the portion of the guide wire receiving member which does not extend through the

lumen of the distal mounting portion is slidably disposed within the lumen of the intermediate portion of the outer catheter member.

31. (Previously Presented) The catheter assembly of claim 26 wherein the lumen of the intermediate portion of the outer catheter member has a proximal opening and the proximal portion of the outer catheter member extends into this proximal opening.

32. (Currently Amended) The catheter assembly of claim 31 wherein the guide wire receiving member is housed in ~~extends into the proximal opening of~~ the lumen of the intermediate portion.

33. (Previously Presented) The catheter assembly of claim 26 wherein the intermediate portion of the outer catheter member is made from a material which is more flexible than the material forming the proximal portion of the outer catheter member.

34. (Previously Presented) The catheter assembly of claim 26 wherein the proximal portion of the inner catheter member is made from a hypotube.

35. (Previously Presented) The catheter assembly of claim 26 wherein the distal portion of the outer catheter member is made from a nylon-coated polyimide material.

36. (Previously Presented) The catheter assembly of claim 35 wherein the nylon-coated polyimide material has an inner layer made from polyimide and an outer layer made from nylon.

37. (Withdrawn) The catheter assembly of claim 1 wherein the guide wire receiving member is made from a tubular member having a wire coil disposed therein.

38. (Currently Amended) The catheter assembly of claim 1 wherein the proximal portion of the inner member is made with a hypotube.

39. (Previously Presented) The catheter assembly of claim 3 wherein the hypotube is made from stainless steel or a nickel-titanium alloy.

40. (New) The catheter assembly of claim 1, wherein the anti-rotation component of the outer member has a U-shape and the inner member includes a channel which receives the U-shaped anti-rotation component of the outer member.

41. (New) The catheter assembly of claim 40, wherein the anti-rotation component of the outer member surrounds the channel of the inner member.

42. (New) The catheter assembly of claim 26, wherein the anti-rotation component of the outer member has a U-shape and the inner member includes a channel which receives the U-shaped anti-rotation component of the outer member.

43. (New) The catheter assembly of claim 42, wherein the anti-rotation component of the outer member surrounds the channel of the inner member.

44. (New) A catheter assembly comprising:
a control handle;

an inner catheter member including a distal mounting portion adapted to have a medical device mounted thereon, a proximal portion having a proximal end attached to the control handle, a guide wire receiving member for receiving a guide wire, the guide wire receiving member having a proximal end with an opening and a distal end with an opening, a lumen extending between these openings, and a channel formed near the proximal opening of the guide wire receiving member; and

an outer catheter member co-axially disposed over the inner catheter member and dimensioned for relative axial movement relative to each other, the outer catheter member having a distal portion adapted to at least partially cover the medical device, the outer catheter member having a proximal end attached to the control handle and a distal end opening, the outer catheter member being movable by the control handle to uncover the medical device, the outer catheter member including a proximal portion having a lumen for receiving at least a portion of the inner catheter member and the guide wire receiving member, a guide wire exit opening formed proximal to the distal end of the outer catheter member, the outer catheter member including an anti-rotation component located near the guide wire exit opening which extends into the lumen of the outer catheter member to abut against the channel of the inner member to permit axial movement but prevent rotational movement between the outer and inner catheter members.

45. (New) The catheter assembly of claim 44, wherein the anti-rotation component of the outer catheter member has a U-shape which slides in the channel of the inner catheter member.

46. (New) The catheter assembly of claim 45, wherein the anti-rotation component of the outer catheter member surrounds the channel of the inner catheter member.